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**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking Regarding  
Broadband Infrastructure Deployment and to  
Support Service Providers in the State of  
California.

R. 20-09-001  
(Filed September 10, 2020)

**OPENING COMMENTS OF**

**FRONTIER CALIFORNIA INC. (U 1002 C)  
CITIZENS TELECOMMUNICATIONS COMPANY OF CALIFORNIA INC. DBA  
FRONTIER COMMUNICATIONS OF CALIFORNIA (U 1024 C)  
FRONTIER COMMUNICATIONS OF THE SOUTHWEST INC. (U 1026 C)  
("FRONTIER")**

**ON AUGUST 6, 2021 ASSIGNED COMMISSIONER'S RULING**

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September 3, 2021

## **I. INTRODUCTION**

Pursuant to the Assigned Commissioner's Ruling issued on August 6, 2021 ("ACR"), Frontier California Inc. (U 1002 C), Citizens Telecommunications Company of California Inc. dba Frontier Communications of California (U 1024 C), and Frontier Communications of the Southwest Inc. (U 1026 C) (collectively, "Frontier") submit these opening comments as specified in the ACR.

As a telecommunications provider in some of the most rural and difficult to serve areas of California, Frontier well understands the need for and positive role that public investment can have in underserved communities. By combining its own investment and participation in the Connect America Fund and California Advanced Services Fund ("CASF"), Frontier has worked in partnership with the state and federal government to expand and improve broadband services in many rural California communities. However, there is still work to be done as many parts of the state remain underserved, and Frontier applauds the Legislature's dedication of significant public resources through SB 156 to fund middle mile and last mile fiber projects that connect these areas.

In executing its statutory obligation to recommend and prioritize middle mile routes the Commission should strive to: 1) base its determinations on the best data available; 2) coordinate its middle mile priorities with last mile projects that will deliver enhanced services to end users on the shortest possible timeframe; 3) prioritize the deployment of technologies that deliver high speed symmetrical performance and future scalability; 4) address public safety needs in those areas of the state increasingly impacted by wildfires and that lack sufficient diversity of routes; and 5) deploy the funding in a fiscally responsible manner so that it has the broadest impact. If the Commission is guided by the foregoing principles, it can best ensure that it is properly stewarding taxpayer funds and maximizing the return on this critical investment for all Californians.

## **II. ACCURATE INFORMATION IS ESSENTIAL.**

The Commission should base its recommendations on the most complete and accurate information about existing and pending infrastructure possible. To achieve this, the Commission

should ensure that its initial priority determinations can be supplemented with additional data prior to finalization. This is particularly important because the record in this proceeding is not likely to provide, at least not initially, a comprehensive view of the existence of middle mile routes. California has middle mile providers in the state that are not regulated by the Commission and, therefore, are under no obligation to share their route data in this forum. In recognition of this deficit, the Commission should coordinate with other agencies—such as the Department of Technology and California Department of Transportation—to identify routes. In addition, the Commission should establish a process for providers to challenge route determinations if existing middle mile infrastructure is in place (or being built) and areas identified as priority routes. Further, to ensure maximum benefit from the public money spent on this endeavor, it is also very important to avoid prioritizing any routes that would overbuild existing or upcoming Rural Digital Opportunity Fund (“RDOF”) and CASF approved grants for broadband infrastructure, which would constitute double investment in an unserved area without double the return.

Further, in identifying priority areas, the Commission should minimize the overbuild of existing infrastructure to the fullest extent possible. Sound stewardship of the scarce public resources appropriated for this initiative favor this approach. The public network should limit competition with privately-funded networks to encourage private investment in the state. With these concerns in mind, the Commission should incorporate information from other state and federal agencies to help prioritize middle mile construction. The Commission, aided by such other agencies, should do its due diligence to follow the legislative intent to identify all existing middle mile infrastructure—and not just that deployed by providers under its jurisdiction—in order to prioritize middle mile routes.

### **III. FRONTIER SUPPORTS CONSTRUCTION OF MIDDLE MILE FIBER INFRASTRUCTURE AND URGES THE COMMISSION TO COUPLE IT WITH LAST MILE PROJECTS.**

The generous allocation of over \$3 billion to enhance middle mile networks in California is an important step in making broadband more broadly available in California’s underserved communities. To ensure that the funded middle mile infrastructure actually delivers greater end user connectivity, the Commission must pair middle mile project priorities with funded last mile

initiatives. By coupling middle mile and last mile investments, the Commission can ensure that targeted communities are served as timely as possible.

In extremely rural/low density areas, the middle mile cost can be a significant cost component due to the low number of customer locations served with last mile initiatives. However, the mere existence of middle mile is not a guarantee that either last mile deployment will be more affordable or that it will be undertaken at all. Based on Frontier's experience, generally the last mile infrastructure is often the costliest component of broadband deployment projects, even in higher density population areas; these costs are amplified in lower density areas.

Because last mile deployment costs are a significant impediment to ubiquitous broadband deployment, without close coordination of middle mile and last mile priorities, a community could remain unserved for many years, despite the existence of robust middle mile that could serve that community. For this reason, it is important that the Commission be strategic in its middle mile priorities and couple middle mile deployments with last mile projects. Doing so is the only way to ensure that deployed middle mile infrastructure will actually bring improved broadband connectivity to individual users and communities.

The Commission should also look to partner with private entities that are committed to and have a demonstrated ability to improve broadband availability. As noted above, Frontier has for many years worked to combat the digital divide in California through both its own investment and by being an active participant in federal and state broadband grant programs. In fact, Frontier recently committed to expand Fiber-to-the-Premises ("FTTP") to more than 350,000 locations in California utilizing its own capital.<sup>1</sup> As recently as June 3, 2021, Frontier filed 22 separate projects for CASF RDOF adjacent areas—all of which propose FTTP projects to serve both low-income and very rural areas—and filed 22 applications through the Commission's CASF RDOF Kicker Program.<sup>2</sup> In addition, Frontier has nine CASF grant applications from May 2020 still pending approval—all of which focus on rural areas, include

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<sup>1</sup> In its 2016 acquisition of Verizon California, Frontier committed to enhance broadband to over 750,000 households, including to 100,000 households where there was no broadband at all.

<sup>2</sup> The RDOF is a federal source of funds for deploying broadband facilities. The Kicker Program was set up by the Commission to leverage the federal RDOF funds. *See* D.21-01-003 (January 14, 2021).

middle mile facilities, and would deliver FTTP Gigabit services to underserved locations.<sup>3</sup> If approved, each of these grants would further contribute to achieving the state's objective of expanding and enhancing broadband availability across the state.

As with other auction winners, Frontier's participation in the RDOF will bring middle mile and FTTP to underserved rural areas of the state. The Commission should account for this investment and pending deployments when it makes its priority determinations so as not to double fund a given area. By excluding RDOF areas, the Commission will ensure that the state's dedicated funding reaches further and has the broadest possible impact for as many residents of California as possible. It will also prevent creating a "windfall" for auction winners who would effectively benefit from a second deployment subsidy or otherwise delay RDOF deployments as winners await state completion of middle mile projects.

#### **IV. WITH A VIEW TO THE FUTURE, THE COMMISSION SHOULD PRIORITIZE SYMMETRICAL UPLOAD SPEEDS AND FUTURE GROWTH FOR ALL FUNDED PROJECTS.**

Through its implementation of SB 156 and pursuit of the Governor's overarching goal to connect all Californians, Frontier encourages the Commission to be forward-looking and prioritize investment in technologies that provide the highest performing connectivity today and for the future. Investment today for future need will yield the highest return.

Our collective recent experience with the Covid pandemic and remain at home mandates have opened consumers to a whole new world of broadband interactivity. Almost overnight, applications with greater upload sensitivity became indispensable to daily living. Video conference calls became a staple of the daily work from home experience and critical to maintaining productivity and our economy. Applications like remote schooling and telemedicine provided access to instruction and health care services when in person services were unavailable. Undeniably, the future will bring an even greater proliferation of bandwidth intensive, innovative applications and uses, and our broadband connectivity needs will continue to grow. We must prepare now.

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<sup>3</sup> Frontier recently completed projects in the very rural areas of Desert Shores, Weimar, Taft and Lytle Creek with the assistance of CASF funding.

With the future in mind, the Commission should incorporate the concept of symmetrical speeds into its broadband policies and should fund technologies, like fiber, that are scalable for future growth. The need for symmetrical speeds and scalability for future expansion should be factored into the identification of priority locations and funding decisions for deploying or upgrading all broadband infrastructure, including for the state's construction of middle mile network infrastructure. Instead of recommending a middle mile network for today (or yesterday), the Commission should acknowledge that the future will demand symmetrical speeds and network growth and make its recommendations accordingly.

More specifically, the Commission should ensure that all state deployed middle mile network infrastructure contemplate and incorporate future growth at its inception. Frontier supports a technology-neutral approach to the middle mile network construction. Starting from this premise, Frontier recommends network construction that supports at least 10 gigabits, which will support Fiber to the Cell Site ("FTTCS"), FTTP and anchor institutions. Further, where new infrastructure is deployed, the state should install the largest possible fiber count possible, and in any event not less than 432 count fiber cable, to position the state for future uses that cannot be predicted today. Any infrastructure built should also accommodate symmetrical upload capabilities and be scalable for future growth, including through meet point locations. Last, all middle mile projects should include the deployment of additional conduit and meet point locations to enable future access without unnecessary costs associated with intercepting existing fiber cables and 'cutting-in' new access points. Providing these access points will enable new markets, new industrial complexes, and FTTCS locations to be economically added to the network. Further, adding additional conduits and access points along the routes is a small incremental upfront investment that will provide future benefits as areas experience growth.

**V. THE COMMISSION SHOULD PRIORTIZE PUBLIC SAFETY AND HIGH FIRE THREAT DISTRICTS IN ITS IDENTIFICATION OF MIDDLE MILE ROUTES.**

As a publicly-funded project, the SB 156 middle mile network should maximize the public benefits that it will deliver. Encouraging deployment of high-speed broadband is an obvious, and explicitly intended, public interest benefit. However, the amount appropriated for the middle mile network will still not be able to accommodate deploying infrastructure to every area of the state where middle mile facilities are missing (which further makes the case that

overbuild of existing middle mile facilities should not occur). Accordingly, the Commission will have to identify additional factors for prioritizing deployments. In light of the recent and accelerating impacts of extreme weather and wildfires on Californians, particularly those in rural and remote areas, public safety should be a paramount objective for the Commission and the most significantly weighted factor for identifying priority areas. As released, the mapping analysis undertaken by Staff does not sufficiently address public safety needs.

A. The Commission Should Prioritize Public Safety in Its Recommendations.

With public safety as a heavily weighted priority, the Commission should identify rural routes in Tier 2 and Tier 3 high fire threat districts (“HFTDs”) where middle mile infrastructure does not exist or is limited to lower bandwidth microwave systems (1Gbps or less) that struggle to provide the higher data speeds that are required in a modern education and business environment. Although as discussed above, the last mile may still present an impediment to access, ensuring the presence of middle mile in these HFTDs will present the best possible opportunity that communities without broadband but most threatened by the new reality of seasonal wildfires will one day have access to high speed communications, or at a minimum diverse middle mile networks to support e911 and other basic voice services that could help save their lives. Along these lines, also focusing the new middle mile network on redundancy through alternate routes (*i.e.*, not overbuild) in Tier 2 and Tier 3 HFTDs will benefit reliability and, therefore, public safety.

B. The Commission Should Not Make Recommendations Based on Access to 100 Mbps Download Speeds.

The ACR proposes that the new middle mile network should identify routes based on an analysis of areas that purportedly do not have access to 100 Mbps. Starting from this premise, and building on it with a lightly explained placement of circles on a map, the ACR’s map of the proposed middle mile build shows substantial new facilities in the San Francisco Bay Area and the Los Angeles Basin. There are several deficiencies in this approach.

First, the proposal to base recommendations on the availability of 100 Mbps download speeds runs afoul of SB 156, which explicitly focused on access to 25 Mbps speeds. *See, e.g.*, Gov. Code Section 11549.54.

Just as significantly, basing network deployment on 100 Mbps will misallocate the \$3.25 billion budgeted by the Legislature for this undertaking. This approach assumes that the lack of

availability of 100 Mbps is due to the absence of middle mile network. However, there is no evidence that absence of middle mile correlates to high-speed broadband access. In fact, as Frontier notes earlier in these comments, the primary impediment to high-speed broadband is the cost of the last mile facilities. In rural communities, this is due to a lower density of locations. In more urban areas, road crossings, driveways, landscaping permitting and undergrounding of facilities drive higher costs.

The ACR map intuitively makes the point. Relying on the 100 Mbps standard, the map proposes substantial buildout in the San Francisco Bay Area and the Los Angeles Basin, two areas in not just the state, but the entire country, that have the most built out networks. In those communities, unavailability of higher speed services is attributable to other factors, particularly, adoption. Accordingly, any formula that results in overbuilding in the San Francisco Bay Area and the Los Angeles Basin misallocates the scarce resource represented by the money budgeted through SB 156.

Moreover, in reviewing the map that accompanied the ACR, it is not clear what criteria the Staff used in creating it, and additional explanation from Staff for the entire decisional basis for its mapping of routes is needed. For example, while it is not advocating for the construction of middle mile facilities along the entire stretch of Highway 50 from Sacramento to South Lake Tahoe, Frontier queries why the proposed route on Highway 50 ends near Pollock Pines approximately half-way to South Lake Tahoe. A clearer understanding of the basis for this and similar decisions on the map would help frame input on the proposals made by the map.

## **VI. THE COMMISSION SHOULD DEPLOY THE FUNDING IN A FISCALLY RESPONSIBLE MANNER TO INCREASE ITS IMPACT**

There are a number of steps that the Commission can undertake to ensure that it realizes the maximum possible return from the funding appropriated by SB 156. These include, identifying routes where need and impact is highest and leasing fiber where available instead of independent construction.

### **A. Identification of Specific Routes Where New Middle Mile Infrastructure Would Benefit Broadband Deployment.**

While the last mile remains the most significant impediment to access to high-speed broadband, Frontier believes there are opportunities for last mile deployments that could be



supported with new middle mile network. With those opportunities in mind, Frontier recommends the following high-level descriptions of routes that should be prioritized for middle mile network construction.

- (1) Highway 101 – Garberville area.
- (2) Highway 101 – Orrick and Klamath areas.
- (3) Highway 36 - Mad River and southern Hayfork areas.
- (4) Highway 36 – area between Red Bluff on the west and Chester, Westwood and Susanville communities on the east.
- (5) Highway 395 – area of Northeastern California from the Oregon border south towards Nevada, including Alturas to Susanville and areas south.
- (6) Highway 299 – area between Willow Creek and Weaverville.
- (7) Highway 299 - area between Palo Cedro and Alturas.
- (8) Highway 116 – Cazadero/Timber Cove area.

To the extent the Commission needs additional information regarding these proposed routes, Frontier will work with the Commission to provide it.

B. The State Should Lease Fiber Where Available and Necessary to Create an Open Access Middle Mile Network.

The ACR asks whether the state’s middle mile network should rely exclusively on newly-built facilities, or whether the state should lease fiber as part of its network. Initially, Frontier observes that the state should minimize instances where it is over-building existing middle mile fiber networks. Frontier also believes that most existing middle mile networks are open access, such that Internet service providers generally have the ability to move Internet traffic to the cloud if they are able to solve the last mile. However, in those rare instances where middle mile exists and is not open access, then the state should make a legitimate attempt to lease fiber from the privately-owned network before it decides to over-build that network.

## **VII. CONCLUSION.**

Based on the foregoing, in making its recommendations for a new publicly-owned middle mile network, the Commission should: 1) base its determinations on the best data available to develop accurate maps and minimize instances where the new network overbuilds existing

middle mile infrastructure; 2) coordinate its middle mile priorities with last mile projects that will deliver enhanced services to end users on the shortest possible timeframe; 3) prioritize the deployment of technologies that deliver high speed symmetrical performance and future scalability; and 4) address public safety needs in those areas of the state increasingly impacted by wildfires and that lack sufficient diversity of routes. By undertaking these steps, the Commission will ensure that it deploys the funding in a fiscally responsible manner so that it has the broadest impact.

Respectfully submitted on September 3, 2021, at Oakland, California.

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